

Imaging diagnosis

Case 400

4. Colon varices

【Progress】

He was scheduled to receive sclerotherapy under colonoscopy. However, his consent was not yet to be given.

【Discussion】

Inferior mesenteric shunts to systemic veins develop in case of portal hypertension arisen from liver cirrhosis or post intraperitoneal surgery and induce to cause encephalopathy (1-8). There are three ways of inferior mesenteric vein (IMV) shunts to systemic veins: IMV to internal iliac vein, IMV to gonadal vein, and IMV to renal vein (1-8).

IMV to systemic shunts form elongated and dilated pathway with functional and stagnant segments (1). Functional segment indicates the presence of blood flowing from inflow or outflow opening, while stagnant segment indicates the interspace with no effects via inflow and outflow. The stagnant segment is found out by balloon inflation at the interest portion. Namely, a stagnant segment is found out by balloon-assisted occlusion and contrast-medium infusion, while no stagnation of contrast medium flow under balloon inflation at the interest segment indicates functional segment. The selective infusion of sclerotic agent such as 5% ethanolamine oleate (EO) to stagnant segment induces occlusion of shunt, leading to improvement of encephalopathy.

In our case, he was a more-than-ten-year-survivor after pancreatectomy for pancreas head cancer. The spleen remained though splenic artery and vein were removed. It caused collateral development from splenic venous hilar branches to inferior mesenteric vein through transverse portal vein. As a result, transverse varices emerge as one of the collaterals. It is considered that pressure gradients between splenic branch veins to IMV are smaller than IMV to systemic shunts, and intraluminal pressure between them is not aggravated because of stable spleen size.

Our patient did not experience encephalopathy. Then, predictive management for transverse colon varices is controversial. The principle for management is from the outflow approach for catheter treatment. Three managements are listed for this case with colonic varices; as outflow approach, catheter insertion by hepatic puncture, catheter advance to transverse colon varices via portal vein and IMV, and occlusion of transverse varices using 5%EO or coil placement; as inflow approach, catheter insertion by splenic puncture, catheter advance to transverse colon varices and occlusion of transverse varices using 5%EO or coil placement: as direct sclerotherapy, direct puncture to colon varices itself under endoscopic approach using 5%EO. Watchful observation using contrast-enhanced CT is also possible for this case because of no consideration of spleen enlargement, no symptoms of encephalopathy and no episodes of hematemesis.

【Summary】

We presented a seventy-seven-year-old male with transverse colon varices. He had previously received pancreatectomy with resection of splenic artery and splenic vein, remaining spleen that induced to develop collaterals to hilar splenic vein to internal mesenteric vein via transverse colon vein, resulting in formation of transverse colon varices. It is borne in mind that there are three routes for management with use of 5% ethanol amine oleate or micro coils: via transhepatic approach, via trans splenic approach and via direct approach under endoscopic control.

【References】

1. Minamiguchi H, Kawai N, Sato M, et al: Balloon occlusion retrograde transvenous obliteration for inferior mesenteric vein-systemic shunt. J Vasc Interv Radiol 22(7): 1039-1044, 2011
2. Sherlock S, Summerskill WH, White LP, Phear EA. Portal-systemic encephalopathy; neurological complications of liver disease. Lancet 1954; 4:454-457.
3. Kiriya M, Takashima S, Sahara H, et al. Case report: portal-systemic encephalopathy due to a congenital extrahepatic portosystemic shunt. J Gastroenterol Hepatol 1996; 11:626-629
4. Mataka K, Tajima T, Yoshimitsu K, et al. Hepatic encephalopathy from dual splenorenal shunts treated with balloon-occluded retrograde transvenous obliteration by using a double-balloon technique. J Vasc Interv Radiol 2007; 18:1436-1440.
5. Uflacker R, Silva A, d'Albuquerque L, et al. Chronic portosystemic encephalopathy: embolization of portosystemic shunts. Radiology 1987; 165:721-725
6. Sakurabayashi S, Sezai S, Yamamoto Y, et al. Embolization of portal-systemic shunts in cirrhotic patients with chronic recurrent hepatic encephalopathy. Cardiovasc Interv Radiol 1997; 20:120-124
7. Katamura Y, Aikata H, Azakami T, et al. Balloon-occluded retrograde transvenous obliteration for portal-systemic encephalopathy due to superior mesenteric-caval shunt via the right gonadal vein. Intern Med. 2007; 46:1479-1480
8. Smith J, Black M, Mendler M. Concomitant hepatic encephalopathy and refractory ascites: successful treatment with staged embolization of two large portosystemic shunts and transjugular intrahepatic

[back](#)

2025.8.23